



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

DEVAL L. PATRICK
Governor

MAEVE VALLELY BARTLETT
Secretary

DAVID W. CASH
Commissioner

September 22, 2014

Mr. Ernie Laberge
Adhesive Applications, Inc.
41 O'Neill Street
Easthampton, MA 01027

RE: Easthampton
Transmittal No.: X260850
Application No.: WE-14-010
FMF No.: 25961
AIR QUALITY PLAN APPROVAL

Dear Mr. Laberge:

The Massachusetts Department of Environmental Protection ("MassDEP"), Bureau of Waste Prevention, has reviewed your Non-major Comprehensive Plan Application ("Application") listed above. This Application concerns the proposed replacement of the facility's existing thermal oxidizer with two CIRE Technologies, Inc. regenerative thermal oxidizers (RTOs) as well as the conversion of a research and development (R&D) coater (Coater #3) to a production coater located at 41 O'Neill Street in Easthampton, Massachusetts ("Facility"). The Application bears the seal and signature of Thomas Couture, Massachusetts Registered Professional Engineer Number 27553.

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 "Air Pollution Control" regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-N, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP's review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator ("Permittee") must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

Adhesive Applications, Inc. (formally known as Adhesive Application, Inc. – Stik II Division) manufactures packing and sealing devices and provides manufacturing solutions for pressure sensitive tape needs. The tape consists of a thick, closed cell polyethylene foam which is coated with a high performance solvent-based¹ adhesive with either a synthetic rubber or an acrylic base. The facility has also developed a line of removable products, with permanent adhesive on one side and removable adhesive on the other, as well as removable adhesive on both sides. The facility's products are used by automotive, electronic, plastics molders and extruders, appliance, furniture, and window and door manufacturers.

The facility currently has MassDEP Plan Approval (#1-P-10-036, 12/28/2010) to operate two coater lines known as the Stik II line (Coater #1) and the DPI Line (Coater #2) and to control emissions of volatile organic compounds (VOCs) and hazardous air pollutant (HAPs) from these coatiers utilizing an Anguil model 200 RTO. In addition to determining the best available control technology (BACT) conditions for Coater #3, this Plan Approval ensures that the installations of the two new RTOs will meet or exceed the BACT determination of the previous Anguil thermal oxidizer. **This Plan Approval establishes new provisions for the installation and operation of the two new RTOs. Provisions within Plan Approval #1-P-10-036 specific to the Anguil RTO are withdrawn. Otherwise, provisions related to the coating process of Coatiers #1 and #2 from Plan Approval #1-P-10-036 are maintained.**

A. Project Description – Additional Coater #3

Coater #3 is a modular coater with a maximum web width of 12-inches and a maximum web speed of 20-feet per minute. The coatings will be applied to a paper substrate and will consist of water-based, solvent-based, and silicone-based coatings containing VOCs and HAPs. The worst-case emission rate of VOCs and total HAPs from Coater #3 were estimated to be 101 tons per year and 9.2 tons per year, respectively. This worst-case potential to emit was determined by calculating the product of the web widths, web speeds, and the maximum application rate of the worst-case coating running 8,760 hours per year. For safety reasons, the coating application rate is limited by the lower explosive limit (LEL) of the coating at the coater head.

Like Coatiers #1 and #2, the coater head and associated coater oven on Coater #3 will be individually surrounded by permanent total enclosure (PTE). A manometer will continuously monitor the pressure within each PTE to indicate 100% capture. At its exit, Coater #3 will have a low-leakage control damper that will either route the exhaust to the atmosphere or to the RTOs. When water-based coatings are used, exhaust will be routed to the atmosphere. Exhaust from solvent-based production runs will be routed to one of the two RTOs each with a destruction efficiency of 99%.

¹ Solvent-based is defined herein as a coating/cleaning solution with a VOC/HAP content greater than 0.2 pounds per pound of solids applied and greater than 3% by weight before control.

In addition to process emissions, the facility will use methyl ethyl ketone (MEK, or equivalent) for clean-up operations. Coating head cleaning will be performed within the permanent total enclosure (PTE) with 100% capture. The rolls on the coating machine are cleaned periodically in one of two ways: 1) the rolls are cleaned in place on the coater; or 2) the rolls are removed from the machine and brought into the Mix Room/Flammable Storage Room for a more thorough cleaning.

Both methods are done by hand with rags. If the cleaning takes place on the machine, VOC emissions are captured by the PTE. When the rolls are brought into the mix room/flammable storage room, they are cleaned in a shallow pan with less than 2 inches of solvent. When cleaning is complete, the solvent and cleaning rags are transferred back to covered containers. VOC emissions within the mix room/flammable storage room are captured by a combination of intake vents that are routed to one of the two RTOs. Makeup air is supplied via the roof of the building. All VOC emissions will be vented to a RTO during cleaning operations.

The facility has proposed that, with controls, the coating process from Coater #3 will emit 1.0 ton of VOCs and 0.1 tons of total HAPs in any 12 consecutive months. The facility has proposed to use 75 gallons per month of clean-up solvent (MEK), which will result in an additional 60 pounds per year of VOC emissions, after control. The facility-wide VOC and HAP emissions established through Plan Approval #1-P-10-036 will remain in effect.

Coater #3 has two (2) natural gas-fired dryers, each with a heat input capacity of 0.55 MMBtu/hr.

B. Project Description – Regenerative Thermal Oxidizers

The two proposed RTOs are identical. They will have a maximum inlet capacity of 12,000 standard cubic feet per minute. They will be equipped with a Maxon Corporation Kinemax #0300KM (or equivalent) natural gas-fired burner with a maximum heat input of 2 million Btu per hour. The units will be heated to 1,500°F prior to processing exhaust from the coaters. The minimum operating temperature, as measured at the downstream end of the combustion chamber, will be 1400°F which will allow for a minimum residence time of 1.0 seconds. The combustion chamber temperature will be controlled by a SRZ module type controller manufactured by RKC Instruments of South Bend, Indiana.

All three coaters and the mix room/flammable storage area will have a maximum air flow of 22,000 scfm under maximum load which is less than the maximum design capacity of the two RTOs (2 RTOs at 12,000 scfm each). One RTO has the capacity to control either Coater #1 or Coater #2, but not both. The system will be interlocked with linked motorized isolation dampers with limit switches to prove the position of the damper; all of which report to the programmable logic controller (PLC) to prevent exceeding the individual thermal oxidizer's capability. This will prevent the ducting of Coater #1 and Coater #2 simultaneously to a single thermal oxidizer.

Each RTO has three (3) ceramic beds with heat exchangers to recover heat from the oxidation process and pre-heat the incoming air stream prior to entering the burner chamber. At temperatures greater than 1,550°F, a hot side heat exchanger bypass will open. If the combustion temperature drops to 1,450°F, an audible and visible alarm will sound and the RTO burner will be automatically fired with natural gas to maintain the combustion chamber temperature above 1,400°F. A continuous chart recorder will monitor the thermal oxidizer operating temperature. The three ceramic beds allow for purging of the idle bed.

BACT Determination

In order to satisfy the best available control technology (BACT) requirements of 310 CMR 7.02(8)(a)2, Adhesive Applications, Inc. has proposed the following:

- Coating operators will sign off on all water-based/solvent-based coating changes;
- When applying water-based coatings, emissions will be vented to atmosphere;
- When applying a solvent-based coating/cleaning solution:
 - Emissions will be captured at 100% PTE (demonstrated by compliance with EPA Method 204) and vented to one of two regenerative thermal oxidizers. Both RTOs are guaranteed to achieve a minimum 99% destruction efficiency of VOCs and HAPs ;
 - The system will have a mechanical interlock to prevent the coating process from proceeding until the RTO reaches a minimum of 1,500°F;
 - A mechanical interlock will shut down the coating process if the combustion chamber temperature of the RTO is less than 1,400°F;
 - A low leakage control damper will direct emissions from water-based operations to the atmosphere and direct solvent-based operations to a RTO. Adhesive Applications will use standard operating procedures to provide redundant confirmation of the direction of flow by use of a visual gauge on the damper;
- The maximum VOC application rate from Coater #3, before control, will not exceed 23.2 pounds of VOC per hour;
- The maximum HAP application rate from Coater #3, before control, will not exceed 2.1 pounds of HAP per hour;
- In accordance with 310 CMR 7.18, the facility will implement work practices to minimize the evaporation of VOCs and HAPs while using solvent-based coatings and cleanup solutions on Coater #3. Provisions for good storage and handling practices have been included in Table 6, Special Terms and Conditions;
- While mixing and/or cleaning operations are taking place, the Permittee will ensure that air flow at the mixing stations has a minimum velocity of 200 feet per minute and exhaust will be routed to an RTO at a minimum temperature of 1,400°F.

The use of a PTE with 100% capture efficiency in conjunction with a RTO minimum destruction efficiency of 99% for solvent-based coating/cleaning operations maintain the BACT determination in the facility's previous Plan Approval #1-P-10-036.

Applicable Regulatory Requirements

In addition to being subject to the BACT requirements of 310 CMR 7.02(8)(a)2, the surface coating operation is subject to the visible emission requirements of 310 CMR 7.06, the dust, odor, construction and demolition requirements of 310 CMR 7.09 and the noise reduction requirements of 310 CMR 7.10.

The two 0.55 MMBtu/hr natural gas-fired drying ovens on Coater #3 and the two RTO burners (at 2 MMBtu/hr each) are exempt from plan approval requirements pursuant to 310 CMR 7.02(2)(b)15.

The Permittee has indicated that the Project is subject to 40 CFR Part 60 Subpart RR, the *Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations*, and will satisfy §60.442(a)(2)(i). A VOC/HAP destruction efficiency of 99%, verified through performance testing (Table 3, Provision 5) satisfies the emission limitations. The recordkeeping and reporting requirements of Subpart RR are incorporated into this Plan Approval.

2. EMISSION UNIT IDENTIFICATION

Each Emission Unit (“EU”) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1			
EU	Description	Design Capacity	Pollution Control Device (PCD)
1	Coater #1 – Stik II Surface Coating Line	Max. Web Width: 63 inches Web Speed: 50 ft/min	2 – CIRE Technologies, Inc. (model # 1209599RTO) Regenerative Thermal Oxidizers (RTOs) each with a 2 MMBtu/hr natural gas-fired Maxon Corporation Kinemax nozzle burner (or equivalent).
2	Coater #2 – DPI Surface Coating Line w/ Boart Manufacturing Natural Gas-Fired Dryer	Max. Web Width: 63 inches Web Speed: 50 ft/min (1) - 3 MMBtu/hr - dryer	
3	Coater #3 – Production (toll) Coater	Max. Web Width: 12 inches Web Speed: 20 ft/min (2) - 0.55 MMBtu/hr dryers	

Table 1 Key:

EU = Emission Unit Number

MMBtu/hr = million British thermal units per hour

PCD = Pollution Control Device

ft/min = feet per minute

APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2			
EU	Operational / Production Limit	Air Contaminant	Emission Limit
1, 2, 3	1. PTE with 100% capture efficiency when applying solvent-based coatings/cleaning solutions.	VOC	-
	2. 2 – CIRE Technologies, Inc. (or equivalent) RTOs with 99% destruction efficiency when applying solvent-based coatings.		
	3. 1,500 °F minimum temperature before start-up of Coater #1, Coater #2, and Coater #3. Minimum thermal oxidizer temperature of 1,400 °F thereafter.		
	4. Minimum air flow of 200 feet per minute at all mix stations within the mix room/flammable storage room.		
3	5. VOC application rate \leq 23.2 lbs./hr.	VOC	1.0 TPY 0.2 TPM
	6. 75 gallons of clean-up solvent per calendar month.		
	7. 900 gallons of clean-up solvent per 12 consecutive months.		
	8. HAP application rate \leq 2.1 lbs./hr.	Single HAP Total HAP	0.1 TPY 0.02 TPM
Facility -wide	-	VOC	15.2 TPY
		Single HAP	9.9 TPY
		Total HAP	15.2 TPY

Table 2 Key:

EU = Emission Unit Number
PTE = Permanent Total Enclosure
RTO = Regenerative thermal oxidizer
°F = degrees Fahrenheit
% = percent
TPM = tons per month
TPY = tons per consecutive 12-month period

VOC = Volatile Organic Compounds
HAP (total) = total Hazardous Air Pollutants
HAP (single) = maximum single Hazardous Air Pollutant.
Solvent-based = a coating/cleaning solution with a VOC/HAP content greater than 0.2 pounds per pound of solids applied and greater than 3% by weight before control.

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

Table 3	
EU	Monitoring and Testing Requirements
1, 2, 3	1. In accordance with the best available control technology provision of 310 CMR 7.02(8)(a)2. and 40 CFR 60.445(g), the Permittee shall install, calibrate, maintain, and operate a monitoring device, such as a manometer, which shall continuously monitor the pressure of each PTE to indicate that the PTE is achieving 100% capture efficiency.
	2. In accordance with the best available control technology provision of 310 CMR 7.02(8)(a)2., the Permittee shall monitor, on a daily basis, the air velocity at all mixing stations within the mix room/flammable storage room to confirm a minimum velocity of 200 feet per minute.
	3. In accordance with 310 CMR 7.02(8)(a)2., audible and visual alarms shall alert the operators if the CIRE Technologies, Inc. (or equivalent) RTO temperature drops to 1,450°F.
	4. In accordance with 40 CFR 60.442(e), the Permittee shall install a continuous chart recorder to monitor the thermal oxidizer operating temperature at the downstream end of the combustion chamber. The monitoring device shall have an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or ± 2.5 °C.

Table 3	
EU	Monitoring and Testing Requirements
1, 2, 3	<p>5. In accordance with 310 CMR 7.02(3)(d), 310 CMR 7.13 and 40 CFR 60.8, the Permittee shall test the capture efficiency for each coater and the VOC/HAP destruction removal efficiency for each CIRE Technologies, Inc. (or equivalent) thermal oxidizer under maximum loading within 120 days after startup of the two RTOs. The emission testing shall conform to the following requirements:</p> <ul style="list-style-type: none"> a. The testing shall take place under maximum and minimum loading conditions that are representative of the facility's operation; b. The Permittee shall submit a pretest protocol to MassDEP for review at least 45 days prior to the anticipated test date. The protocol shall include a description of the proposed test port locations, sampling equipment, testing procedures, and operating conditions; c. The Permittee shall submit the final emission test report to MassDEP within 45 days after the completion of the compliance stack testing. The report shall, at a minimum, include documentation of all test findings and a description of operating parameters (line speed, coatings used, oxidizer temperatures, etc); d. The Permittee shall conduct performance test procedures in accordance with 40 CFR 60.444(c); e. The Permittee shall follow the test methods and procedures in accordance with 40 CFR 60.446.
3	<p>6. In accordance with the best available control technology provision of 310 CMR 7.02(8)(a)2., the Permittee shall install a low leakage control damper to direct emissions from water-based operations to the atmosphere and direct solvent-based operations to a RTO. The damper shall be equipped with a visual gauge for easy and redundant identification of flow path.</p>

Table 3	
EU	Monitoring and Testing Requirements
	<p>7. In accordance with 310 CMR 7.02(3)(d), the Permittee shall monitor, on a daily basis, to demonstrate compliance for each calendar month and 12 consecutive months, the emission limits in Table 2. Such monitoring shall include, but is not limited to:</p> <p>a. For each coating, as applied:</p> <ul style="list-style-type: none"> i. Date; ii. Trade name; iii. Gallons used; iv. Coating density (Pounds per gallon); v. Weight percent of VOC; vi. Weight percent HAP; vii. Application rate of coating (lb/hour); viii. Calculated VOC application rate (lb/hr); ix. Calculated HAP application rate (lb/hr); x. Gallons of cleanup solution used; xi. Pounds of VOC per gallon of cleanup solution; and xii. Pounds of HAP per gallon of cleanup solution.
Facility-wide	8. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration
	9. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13. This testing could include the performance of Method 24 test to determine VOC content of the coatings used.

Table 3 Key:

EU = Emission Unit Number
PTE = Permanent Total Enclosure
PCD = Pollution Control Device
USEPA = United States Environmental Protection Agency
RTO = Regenerative Thermal Oxidizer
CMR = Code of Massachusetts Regulations
CFR = Code of Federal Regulations
VOC = Volatile Organic Compounds
HAP = Hazardous Air Pollutant
Solvent-based = a coating/cleaning solution with a VOC/HAP content greater than 0.2 pounds per pound of solids applied and greater than 3% by weight before control

Table 4	
EU	Record Keeping Requirements
1, 2, 3	1. In accordance with the best available control technology provision of 310 CMR 7.02(8)(a)2. and 40 CFR 60.445(e), the Permittee shall install, calibrate, maintain and operate a continuous chart recorder or computerized data recorder system that continuously records the temperature of the thermal oxidizers exhaust gases.
	2. In accordance with 40 CFR 60.443(e), the Permittee shall record all 3-hour periods (during actual coating operations) during which the average temperature of the CIRE Technologies, Inc. (or equivalent) RTO is more than 50 °F below the average temperature of the device during the most recent performance test complying with §60.442(a)(2).
	3. In accordance with 310 CMR 7.02(3)(e), on a daily basis the Permittee shall record the pressure of each PTE on Coaters #1, #2, and #3 and indicate whether or not the PTE is achieving 100% capture efficiency.
	4. In accordance with 310 CMR 7.02(3)(e), the Permittee shall record, on a daily basis, the air velocity at all mix stations within the mix room/flammable storage room to confirm a minimum velocity of 200 feet per minute.
1, 2, 3	5. In accordance with 310 CMR 7.02(3)(e), for each production run, the Permittee shall record: <ul style="list-style-type: none"> a. whether the coating was water-based or solvent-based; b. whether exhaust from each solvent-based coating operation was vented to an in-service RTO; c. date, time, and duration of production run; and d. the associated RTO temperature for the production run.

Table 4	
EU	Record Keeping Requirements
3	<p>6. In accordance with 310 CMR 7.02(3)(e), the Permittee shall prepare and maintain sufficient records to demonstrate compliance for each calendar month. Such records shall include, but are not limited to:</p> <ul style="list-style-type: none"> a. For each coating, as applied: <ul style="list-style-type: none"> i. Date; ii. Trade name; iii. Gallons used; iv. Coating density (Pounds per gallon); v. Weight percent of VOC; vi. Weight percent HAP; vii. Application rate of coating (lb/hour); viii. Calculated VOC application rate (lb/hr); ix. Calculated HAP application rate (lb/hr); x. Gallons of cleanup solution used; xi. Pounds of VOC per gallon of cleanup solution; and xii. Pounds of HAP per gallon of cleanup solution.
	<p>7. In accordance with 40 CFR 60.445(d), the Permittee shall maintain a 12 month record of the amount of solvent applied in the coating at the facility.</p>
Facility-wide	<p>8. The Permittee shall maintain adequate records on-site to demonstrate compliance status with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve-month period (current month plus prior eleven months). These records shall be compiled no later than the 15th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html#WorkbookforReportingOn-SiteRecordKeeping.</p>
	<p>9. The Permittee shall maintain records of monitoring and testing as required by Table 3.</p>
	<p>10. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) and PCD(s) approved herein on-site.</p>
	<p>11. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.</p>

Table 4	
EU	Record Keeping Requirements
Facility-wide	12. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s), PCD(s), and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation. Instances of loss of oxidizer safety, fan or damper failure, and/or an episode which results in the opening of the exhaust damper to the atmosphere dump fan shall be recorded.
	13. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	14. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	15. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:

EU = Emission Unit Number
SOMP = Standard Operating and Maintenance Procedure
PCD = Pollution Control Device
USEPA = United States Environmental Protection Agency
RTO = Regenerative Thermal Oxidizer
CMR = Code of Massachusetts Regulations
CFR = Code of Federal Regulations
VOC = Volatile Organic Compounds
HAP = Hazardous Air Pollutant

Table 5	
EU	Reporting Requirements
1, 2, 3	1. In accordance with 40 CFR 60.447(a), the Permittee shall submit to the MassDEP the performance test data and results from the performance test as specified in §60.8(a) of the General Provisions (40 CFR part 60, subpart A).
	2. In accordance with 40 CFR 60.447(b), following the initial performance test, the Permittee shall submit quarterly reports to MassDEP of exceedances of the VOC emission limits specified in 40 CFR 60.442. If no such exceedances occur during a particular quarter, a report stating this shall be submitted to the MassDEP semiannually.

Table 5	
EU	Reporting Requirements
1, 2, 3	3. In accordance with 40 CFR 60.447(c), the Permittee shall submit reports at the frequency specified in §60.7(c) when the incinerator temperature drops as defined under §60.443(e). If no such periods occur, the owner or operator shall state this in the report. All reports shall be postmarked by the 30th day following the end of each six-month period.
	4. The Permittee shall notify MassDEP, Western Region, within 14 days of completion, when both CIRE Technologies, Inc. (or equivalent) RTOs have been installed and when the Anguil thermal oxidizer has been removed from service.
Facility-wide	5. The Permittee shall, by January 31st of each year, submit to MassDEP an annual summary of the 12 monthly reports from the previous calendar year. The report shall summarize emissions for: 1) each calendar month, and 2) for each rolling twelve month period (current month plus prior eleven months) for each month.
	6. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a “Responsible Official” as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	7. The Permittee shall notify the Western Regional Office of MassDEP, BWP Section Chief by telephone: (413) 755-2115, email: marc.simpson@state.ma.us, or fax : (413) 784-1149, as soon as possible, but no later than three (3) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to the Section Chief at MassDEP within ten (10) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	8. The Permittee shall report annually to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.
	9. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30-days from MassDEP’s request.

Table 5 Key:

MassDEP = Massachusetts Department of Environmental Protection
USEPA – United States Environmental Protection Agency
BWP = Bureau of Waste Prevention
EU = Emission Unit Number
RTO = Regenerative Thermal Oxidizer
CMR = Code of Massachusetts Regulations
CFR = Code of Federal Regulations
VOC = Volatile Organic Compounds

4. SPECIAL TERMS AND CONDITIONS

A. The Permittee is subject to, and shall comply with, the Special Terms and Conditions as contained in Table 6 below:

Table 6	
EU	Special Terms and Conditions
1, 2, 3	<ol style="list-style-type: none"> 1. In accordance with the best available control technology provision of 310 CMR 7.02(8)(a)2., the Permittee shall conduct all cleaning operations on the coater within the PTE which shall be routed to the CIRE Technologies, Inc. (or equivalent) RTO. 2. In accordance with 310 CMR 7.02(8)(a)2., the Permittee shall install an interlock that prevents operation without the appropriate RTO preheated to 1,500°F. The temperature of the RTO shall be $\geq 1,400^{\circ}\text{F}$ when applying a solvent-based coating or cleaner. 3. In accordance with 310 CMR 7.02(8)(a)2., the Permittee shall ensure a minimum 1 second residence time in the combustion chamber of the CIRE Technologies, Inc. (or equivalent) RTO.
3	<ol style="list-style-type: none"> 4. The Permittee shall institute the following BMPs: <ol style="list-style-type: none"> a. Store all VOC-containing materials used for surface preparation, cleaning, and rework in closed containers; b. Ensure that mixing and storage containers used for VOC-containing materials used for surface preparation, cleaning and rework are kept closed at all times except when depositing or removing these materials; c. Minimize spills of VOC-containing materials used for surface preparation, cleaning, and rework; d. Convey VOC-containing materials used for surface preparation, cleaning, and rework from one location to another in closed containers or pipes; e. Minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that: <ol style="list-style-type: none"> i. equipment cleaning is performed without atomizing the cleanup solvent; and ii. all spent solvent is captured in closed containers f. Store and dispose of all absorbent materials, such as cloth or paper that are contaminated with VOC-containing materials used for surface preparation, cleaning, and rework in non-absorbent containers that shall be kept closed except when placing materials in or removing materials from the container.
Facility-wide	<ol style="list-style-type: none"> 5. The Permittee is subject to the Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations of 40 CFR Part 60 Subpart RR., 40 CFR Part 60.440 through 60.447, in which authority has been delegated to the MassDEP, and shall comply with all applicable requirements within this subpart.

Table 6	
EU	Special Terms and Conditions
	6. Any prior Plan Approvals issued under 310 CMR 7.02 shall remain in effect unless specifically changed or superseded by this Plan Approval. The Facility shall not exceed the emission limits and shall comply with approved conditions specified in the prior Plan Approval(s) unless specifically altered by this Plan Approval.

Table 6 Key:

EU = Emission Unit Number
PTE = Permanent Total Enclosure
RTO = Regenerative Thermal Oxidizer
NDO = Natural Draft Opening
CMR = Code of Massachusetts Regulations
CFR = Code of Federal Regulations
VOC = Volatile Organic Compounds
HAP = Hazardous Air Pollutant
TPY = tons per consecutive 12-month period
TPM = tons per month
Solvent-based = a coating/cleaning solution with a VOC/HAP content greater than 0.2 pounds per pound of solids applied and greater than 3% by weight before control.

- B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including, but not limited to, rain protection devices known as “shanty caps” and “egg beaters.”

- C. The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (feet)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
1	>29	1.33	45	~ 175
2	>29	1.33	45	~ 175
3	>29	1.33	45	~ 175
RTO #1	>29	2.33	60	200-550
RTO #2	>29	2.33	60	200-550

Table 7 Key:

EU = Emission Unit Number
RTO = Regenerative Thermal Oxidizer
> = greater than

°F = Degree Fahrenheit
~ = approximate

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.

- J. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Should you have any questions concerning this Plan Approval, please contact Amy Stratford by telephone at (413) 755-2144, or in writing at the letterhead address.

This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.

Marc Simpson
Section Chief
Bureau of Waste Prevention

Enclosure

ecc: MassDEP/Boston - Yi Tian
David P. Horowitz, P.E., CSP, Tighe & Bond, Inc.